

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA)

v.)

MARIO ESPINO ,)
Defendant)

CRIMINAL NO. 04-30020-MAP

DEFENDANT'S MOTION FOR AN EVIDENTIARY HEARING

The defendant, Mario Espino, moves that this Honorable Court schedule an evidentiary hearing, if it deems one to be necessary, as part of the sentencing hearing which is scheduled for May 24, 2005. As part of the hearing, the defendant would present one witness, Dr. Harvey Cohen, on the issue of the weight of the narcotics involved.

As grounds, Defendant states that:

1. He has entered guilty pleas to three counts of heroin distribution. The government alleges that the total quantity of heroin is 100.7 grams and consists of three exhibits:
 - a) Exhibit 2- March 7, 2003 purchase, weight 19.6 grams, lab analysis-March 25, 2003
 - b) Exhibit 3- March 26, 2003 purchase, weight 29.9 grams, lab analysis-April 15, 2003
 - c) Exhibit 5- May 13, 2003 purchase, weight 51.2 grams, lab analysis- June 6, 2003
2. He hired Dr. Harvey Cohen as an expert to verify the weight of the drugs. He was not, however, allowed to determine the moisture content of the drugs which could possibly increase the weight. In previous examinations, Dr. Cohen was able to determine that heroin tends to be associated with absorbed moisture. (see attached affidavit) He would offer the opinion that

ALLOWED.
Michael B. Pourn VEST
May 6, 2005

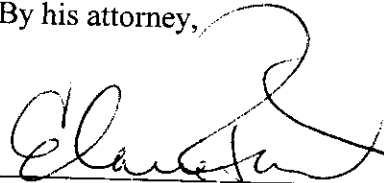
39

because of the possibility of the absorption of moisture in the drugs that there is a reasonable likelihood at the time that the drugs were seized, they weighed less than 100 grams.

An affidavit in support of this motion is attached hereto and incorporated by reference herein.

MARIO ESPINO

By his attorney,

A handwritten signature in black ink, appearing to read 'Elaine Pourinski', written over a horizontal line.

Elaine Pourinski

13 Old South Street

Northampton, MA. 01060

413-587-9807

BB) # 550986

AFFIDAVIT

Re: United States v. Mario Espino Number 04-30020

I, Harvey M. Cohen, do depose and state:

1. I live at 50 Hancock Road, Needham, Massachusetts. I am a consultant in chemistry and industrial hygiene.

2. I have an A.B. in chemistry from Harvard and a Ph.D. in chemistry from the Massachusetts Institute of Technology. I am certified by the American Board of Industrial Hygiene in the Chemical Aspects of Industrial Hygiene. A copy of my C.V. is included as Appendix A.

3. I have been retained by Elaine Pourinski, Esquire to verify the weight of drugs involved in the above matter.

4. I have been retained on many other instances to examine and to verify the weight of drugs alleged in other cases, pending in both federal and state courts. These drugs have included, inter alia, cocaine and heroin.

5. I have weighed the drugs, identified by the Drug Enforcement Agency (DEA) laboratory as heroin, in this matter. I determined the total weight of the drugs to be 99.16 grams. The DEA laboratory had previously determined the net weight of the drugs to be 100.7 grams and the residual weight (presumably, the weight left after removal of some of the drugs for analysis) to be 99.3 grams. At the time of my weighings, I could determine only the weight of the drugs that constituted the evidence at that time. **Clearly I could not check the net weight.** I could check only the amount available at the time of my weighings. The total of the amount of drug at the time I weighed the material was less than 100 grams. I determined this to be 99.16 grams. The DEA determined the total reserve weight to be 99.3 grams.

6. Drugs may increase in weight due to absorption of moisture. This can occur at any time, including the time frame from the seizure of the drugs to the determination of the weight of the drugs by the laboratory.

7. Any absorption of moisture between the time of the seizure of the drugs and the actual determination of the weight of the drugs will increase the actual weight of the drugs and produce a result higher than the weight of the drugs at the time of the seizure.

8. The drugs identified as heroin in this matter were contained within ~~three~~ exhibits, Exhibit 2, Exhibit 3, and exhibit 5. By examination of the DEA Laboratory records, I assumed the following:

The drugs within Exhibit 2 were seized on March 7, 2003, and sealed within a plastic

bag some time after the seizure. The sealed plastic bag was opened on March 24 and the contents analyzed and weighed sometime between March 24 and March 25. All items (plastic bags, powder) within Exhibit 2 were placed into a new plastic bag and the bag heat sealed on March 25. The drugs within Exhibit 3 were seized on March 26, 2003 and sealed within a plastic bag sometime after the seizure. The sealed plastic bag was opened on April 10, 2003, and the contents analyzed and weighed sometime between April 10 and April 15. All items (plastic bags, powder) within Exhibit 3 were placed into a new plastic bag and the bag heat sealed on April 15, 2003. The drugs within Exhibit 5 were seized on May 13, 2003 and sealed within a plastic bag sometime after the seizure. The sealed plastic bag was opened on June 5, 2003, and the contents analyzed and weighed sometime between June 5 and June 6, 2003. All items (plastic bags, powder) within Exhibit 5 were placed into a new plastic bag and the bag heat sealed on June 6, 2003.

I conducted my examination and weighings of the drugs in all exhibits on December 13, 2004.

9. I have previously determined the amount of moisture associated with a heroin sample in another matter to be approximately 3.7%. This was determined by drying a sample of the material and measuring the loss in weight. The experiment indicated that seized heroin tends to be associated with absorbed moisture. A similar loss of weight in this case would suggest a reasonable likelihood that the drug **when seized** weighed less than 100 grams. If the drugs absorbed 3.7% of their weight in water subsequent to the seizure, the weight at the time of the seizure would have been $100.7 \times .963 = 96.97$ grams based on the net weight determined by the DEA. If the drugs absorbed only 25% of this amount of moisture, $(.25 \times 3.7 = .925\%)$, the corrected net weight of the drugs would be $100.7 \times .99075 = 99.76$ grams. In other words, if this sample of heroin were similar in water affinity to that I previously checked for water content and approximately 25% of the water absorbed by the drugs had been absorbed subsequent to the seizure and prior to the final determination of the net weight by the DEA, the actual net weight of the drugs at the time of the seizure would have been less than 100 grams.

10. Drugs can absorb (or lose) moisture at a rate dependant on a number of factors, including, *inter alia*, the nature of the drugs and diluents (hygroscopic tendencies), the moisture content of the drugs, the relative humidity to which they are exposed, the time of the exposure, and the permeability of moisture to any barriers between the drugs and the atmosphere. As noted above, samples of street heroin were found to have significant absorbed moisture. Accordingly, dry samples would be expected to absorb moisture from the atmosphere, as would samples with moisture content below that which would be expected on exposure of the drug to the relative humidity of the atmosphere over a long period of time. Plastic bags would tend to retard, but not eliminate the passage of water to and from the drugs, depending on the nature and thickness of the plastic.

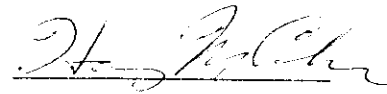
11. I was not allowed to determine the moisture content of the drugs in this case at the time I made my weighings. The DEA Laboratory reports show no determination of the moisture content of the drugs at any time. Based on the available information,

one cannot state the moisture content of the drugs at the time they were seized nor the moisture content of the drugs at the time they were weighed by the DEA Laboratory.

12. In view of the above, it is my opinion that there is a reasonable likelihood that the net weight of the drugs at the time of the seizure was less than 100 grams.

13. In view of the above, it is my opinion that one cannot conclude to a reasonable scientific certainty that the net weight of the drugs when seized was at least 100 grams.

Signed Under Penalties of Perjury this 2d day of May 2005.

A handwritten signature in black ink, appearing to read "H. M. Cohen", written over a horizontal line.

Harvey M. Cohen

CAMBRIDGE TECHNICAL ASSOCIATES
TECHNICAL EXPERT SERVICES

HARVEY M. COHEN, PH.D., DIRECTOR
E-mail: harveycohen@alum.mit.edu

50 HANCOCK ROAD • P.O. BOX 920113
NEEDHAM, MASSACHUSETTS 02492
TELEPHONE: (781) 449-4335 • 449-8383
FAX: (781) 449-1533

APPENDIX A

Harvey M. Cohen, Ph.D., C.I.H.

Consultant: Chemistry, Industrial Hygiene and Safety

Education: A.B. (1958) in Chemistry from Harvard College; Ph.D. (1963) in Chemistry from M.I.T.

Certification: Certified by American Board of Industrial Hygiene in Chemical Aspects of Industrial Hygiene.

Professional Societies: American Chemical Society, including Division of Health and Safety; American Academy of Industrial Hygiene; American Industrial Hygiene Association; National Safety Council, including Committee on Alcohol and Other Drugs.

Industrial and Teaching Experience: Analytical Chemist, Avco Research and Advanced Development Division (1959-61); Senior Chemist, National Research Corporation (1962-69); Senior Engineer, Norton Company (1969-70); Vice-President and President, Technology Associates, Inc. (1970-76); Adjunct Assistant Professor of Chemistry, Northeastern University (1978-83); Instructor at Northwestern University Traffic Institute on Alcohol and Vehicular Homicide (1996, 1997); Instructor at Borkenstein Course (Alcohol), Indiana University (2001- 2002); Speaker at seminars and symposia related to alcohol, alcohol analysis, alcohol toxicology, alcohol pharmacokinetics, and blood-alcohol concentration; Author of numerous publications relating to alcohol; Consultant (1976-Present).

Consulting Experience: Chemistry, Hazardous substances, Industrial Hygiene and Safety, Hazardous Waste, Expert Witness (Product Liability, Product Failure, Liquor Liability, Drunk Driving, Drugs and other Criminal Matters, Workmen's Compensation).

Evaluation and Control of Exposure to Chemicals: OSHA, SARA III and State Right-To-Know Laws (Compliance), Labeling, MSDS Preparation, Protective Clothing, Indoor Air Pollution, Hazardous Consumer Products.

Solvents - Alcohols - Acids - Caustic Materials - Silica - Asbestos - Lead - Beryllium - Metal Fumes - Formaldehyde - Isocyanates - Pesticides - Dyes - Combustion Products.

Flammability and Explosion Hazards: Fires and explosions, flammable gases, liquids and solids, exploding soft drink bottles.

Outside Professional Activities: Judge (chemical and environmental exhibits) in Boston Globe Science Fair (M.I.T.).

PRODUCT LIABILITY • ACCIDENT RECONSTRUCTION • WORKMEN'S COMPENSATION • CRIMINAL EVIDENCE